

THE OCCURRENCE OF *ANOMIS COMMODA* BUTLER
IN THE UNITED STATES AND ITS LIFE HISTORY
(LEPIDOPTERA, PHALAENIDAE,
CATOCALINAE).

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In the fall of 1927 Laurent published a note in *Entomological News* (Volume xxxviii, 320) on the presence of *Rusicada fulvida* Guenée in the United States; Dr. McDunnough made the determination for Mr. Laurent. Guenée described *Anomis fulvida* in 1852 (*Spec. Gen. Lepid.*, vi (Noct. ii), 397); he listed as the locality "Amerique Septentrionale" and the Collection of the East India Company. If two or more specimens existed at that time, all but one have been lost as the only specimen¹ in the British Museum (Natural History) is the one from the Collection of the East India Company. This specimen is marked type and agrees in all details with the description. It is a member of a difficult complex of tropical, Indo-Australian species. This specimen and the description do not agree with the species occurring in the Eastern United States.

The species which Laurent collected and reared from larvae near Philadelphia, and which I collected and reared from eggs this year at Arlington is *Anomis commoda*. It was described as *Gonitis commoda* by Butler (*Ann. Mag. Nat. Hist.* (5), i, 203, 1878), and the female was figured later in the same year (*Illustr. Typical Specimens Lepid. Heter. Brit. Mus.*, ii, 36, pl. 32, fig. 3). The same species was described by Warren (*in* Seitz, *Grossschmetterlinge*, iii, 360, pl. 66, figs. B4 and B5, 1913) as *Rusicada fulvida* subsp. *subfulvida*; the figure of the male is labeled *fulvida*. Both types were from the Tokio-Yokohama area. This is a member of a small group of species which have become adapted to the warmer regions of the temperate zone, and which instead of retreating to the tropics with the approach of cold weather remain as pupae throughout the winter. The genitalia of our specimens agree exactly with those of Japanese specimens.

This species is more closely related to *Anomis crosa* Hbn. and *Anomis flava* than to any other species occurring in the Americas. In the McDunnough Check List it should precede *crosa* and be listed as follows,

¹ Dr. W. T. M. Forbes examined the Guenée type of *Anomis fulvida* in the Collections of the British Museum (Natural History) and in addition made notes on the group in general for me.

commoda Butl.
‡*fulvida* Auct.
subfulvida Warren

Anomis commoda has been collected at Mt. Airy, Philadelphia, Pennsylvania by Philip Laurent, at Moorestown, New Jersey by John W. Cadbury, III and near Minor Hill, Arlington, Virginia by myself. The date of introduction of this species into the United States is a matter of conjecture. I think it is safe to assume that Guenée did not have it before him in 1852 when he drew up his description of *fulvida*, because that description disagrees with this species in all its essential points. It is probable that the moth was introduced from Japan or China in the pupal stage with ornamental plantings of *Hibiscus* in the early part of this century. The point of entry is also a moot question. Thus far the only recorded food plant is *Hibiscus syriacus*, commonly called "Rose of Sharon" or "Althea."

The moth, mostly females, comes infrequently to light. During the past season I took five males and sixteen females at light; the first specimen caught on April twenty-third was a male, the second specimen on May second was a female, from this specimen a brood of moths was reared. The last specimen caught at light was on September twentieth, and the last larvae were found on October twenty-third; these were full grown and pupated within a few days. The moth was taken throughout the entire season; there are apparently three broods with considerable overlapping at Arlington. The larvae were also found on *Hibiscus syriacus* during the whole season; they were most abundant in July, but searching with a flashlight any night would generally reveal some larvae feeding on the foliage of the terminal branches. The larvae were more difficult to find in the daytime as they rested upon the young twigs of the food plant, and their color was an excellent match for that of the twigs.

The female moth caught on the second of May began laying eggs on the fifth and continued to do so for a period of almost four weeks, laying about three hundred and twenty-five. The eggs were very much flattened, slightly ribbed and pale yellow in color, darkening before hatching, which took place five days after oviposition.

The first instar larvae were yellowish upon hatching, but turned green after feeding; the tubercles were black; the first two pairs of prolegs were extremely reduced and not used in walking. The first moult occurred on the third day after hatching. In the second

instar the larvae were unchanged from the first. The second moult came three days after the first. In the third instar the black tubercles were very conspicuous; there was a faint indication of two subdorsal whitish lines; the two first pairs of prolegs were larger and were now used in walking. The third moult followed the second in four days; the larvae in the fourth instar were much like the previous one. The fourth and last moult followed in four days. The larvae in the final instar were greenish gray; the tubercles were black ringed with white; there was a tendency for the occurrence of dark hexagonal markings on the dorsum of each segment, but most noticeable on the first four abdominal segments. The head was brown, often marked with bright yellow-orange on the vertex. All the prolegs were developed, with only the first pair slightly less so than the others. The larvae were about one inch and three quarters long, somewhat slender and slightly depressed dorso-ventrally. They fed for five days, and then spun very flimsy cocoons among the leaves; pupation took place in three to four days, and the moths emerged after another twelve to fifteen days. About ten percent of this brood are overwintering as pupae. In nature I have found the cocoons spun in the angle where the porch roof joins the wall and in a single folded leaf on the food plant. The larvae were fed *Hibiscus syriacus*. In addition they were offered *Hibiscus esculenta*, Okra, and *Althaea rosea*, Hollyhock; one last instar larva fed for a short time on the former, but soon abandoned it and returned to the *H. syriacus*; no attempt was made by any of the larvae to eat Hollyhock.

Wanted.—Brief notes from 6 to 30 typed lines to fill such spaces as this are requested by the Editor.